



# Double Beam Vibrating Screed (Electric)

4.1 m / 6.5 m / 8.2 m

## OPERATING INSTRUCTIONS



### **WARNING**

To reduce the risk of injury, all operators and maintenance personnel must read and understand these instructions before operating, changing accessories, or performing maintenance on this power equipment. All possible situations cannot be covered in these instructions. However care must be exercised by everyone using, maintaining or working near this equipment.

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## INTRODUCTION

Thank you for your selection of Parchem equipment.

Parchem have specialised in the design and manufacture of quality products since 1951.

We have taken care in the assembly and testing of this product. Should service or spare parts be required, prompt and efficient service is available from our branches.

General Safety Instructions for the Operation of Power Equipment.

The goal of Parchem is to produce power equipment that helps the operator work safely and efficiently. The most important safety device for this or any tool is the operator.

Care and good judgement are the best protection against injury. All possible hazards cannot be covered here, but we have tried to highlight some of the important items, individuals should look for and obey Caution, Warning and Danger signs placed on equipment, and displayed in the workplace. Operators should read and follow safety instructions packed with each product.

Learn how each machine works. Even if you have previously used similar machines, carefully check out each machine before you use it. Get the “feel” of it and know its capabilities, limitations, potential hazards, how it operates, and how it stops.

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## APPLICATIONS

- Compaction of concrete slabs
- Aquaducts
- Precast sections
- Airport aprons
- Roadways
- Warehouse floors
- Light rail tracks
- Spillways
- Bridge decks

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## FUNCTION AND CONTROLS

### POWER SUPPLY

Electrical power is controlled by an on/off switch which is mounted on the motor. A thermal overload protection device is fitted to the single phase motor. It is located below the switch. If the motor stops, switch the machine OFF, determine the cause of the

problem, allow the motor to cool, then press the reset button. If the motor fails to start, check the power supply, fuses or circuit breaker and leads.

### DRIVE BELT

Tension of the drive belt is factory set by three plain washers which are fitted between the motor and the frame on each bolt.

### PRE-TENSIONED BEAMS

Applicable only for units fitted with pre-tensioned beams.

Adjust the Cable tension to factory setting by placing a steel ruler against the nut fitted to the threaded end of Cable, and rotating the nut clockwise until the distance between the nut and end of thread is 40 mm. With one nut fitted to threaded end of Cable, this should achieve a concave lower Beam surface of 6 mm. This should be checked with a string line and adjusted further if required until a 6 mm deflection is achieved (Maximum projection of thread from one nut should not exceed 50 mm). The second nut can be fitted and tightened. To protect the exposed thread place a piece of hose in boiling water and push over the thread.

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## HAZARDS AND RISKS

NEVER allow any person to operate the machine without adequate instruction.

ENSURE all operators read, understand and follow the operating instructions.

SERIOUS INJURY could result from improper or careless use of this machine Vibrating screeds are heavy units and should be positioned by four people of appropriate strength. Using the lifting handles provided on the machine, along with correct lifting techniques.

### ! MECHANICAL HAZARDS

DO NOT operate the machine unless all protective guards are in place.

KEEP hands and feet clear of rotating and moving parts as they will cause injury if contacted.

ENSURE that the motor operation switch is in the OFF position and the power lead is unplugged before removing or refitting the diamond blade or making adjustments to the vee belt tension.

DO NOT leave the machine in operation while it is unattended.

EXERCISE CARE when operating unit. Exposure to vibration or repetitive work actions may be harmful to hands and arms.

NEVER stand on the unit while it is operating.

BE CAREFUL not to come in contact with the muffler when the engine is hot, since it can cause severe burns.

### ! ELECTRICAL HAZARDS

THE RISK OF SERIOUS OR LETHAL INJURY FROM

ELECTRICAL SHOCK may arise from the combination of electricity and moisture.

ELECTRICAL HAZARDS may be high due to the careless use of equipment and extension leads.

USE AN ELECTRICAL SUPPLY EQUIPPED WITH A RESIDUAL CURRENT DEVICE (RCD) for protection against electrocution. A RCD is an electronic protection device that is available for connection between the power source and the equipment. It is designed to monitor

the balance of the current flow in the active and neutral wires of the plugged-in equipment and immediately trips before a fatal amount of power can pass through the operator. The RCD can be permanently wired at the supply switchboard or inserted as a removable plug-in device in the electric cable, in which case it

should be located as close to the supply as possible with the RCD located before any extension leads

INSPECT electrical leads, plugs and sockets regularly for damage.

ONLY use the motor with a correctly grounded outlet.

INSPECT electrical leads, plugs and sockets regularly for damage.

DO NOT operate the machine using coiled or tangled extension leads.

ENSURE that repairs to the electric motor and wiring are carried out immediately by QUALIFIED personnel.

### **! NOISE HAZARDS**

EXCESSIVE NOISE can lead to temporary or permanent loss of hearing.

WEAR an approved hearing protection device to limit noise exposure. As required by Occupational Health and Safety regulations.

### **PROTECTIVE CLOTHING**

ALWAYS wear protective clothing and footwear to prevent the skin coming into contact with wet concrete.

PROTECTIVE FOOTWEAR should be worn to reduce injuries from penetration through the sole, contact with cutting objects, slipping, contact with wet concrete and electrical hazards.

GOGGLES for eye protection may also be necessary.

USE waterproof protection for hands and knees (if kneeling) when concreting. If your clothing becomes wet from concrete contact make sure you change the clothing.

Do not walk about waiting for it to dry.

### **! ADDITIONAL HAZARDS**

Slip/Trip/Fall is a major cause of serious injury or death.

Beware of uneven or slippery work surfaces.

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## **OPERATION**

### **USING THE VIBRATING-BEAM SCREED**

The effectiveness of vibration and, hence degree of compaction increases with an increase of the beam weight, the amplitude and the frequency, and decreases with an increase in forward speed. Forward speed is critical in the correct use of vibrating-beam screeds and should be limited to between 0,5 and 1.0 m per minute.

Generally speaking the screed will have a self propelling motion resulting from its vibratory action. It should be positioned on the slab so that its natural direction of travel is away from the finished area. The drag ropes and handles at the end of the beams should be used to control the direction and to supplement the self propelling motion of the screed beams.

Once the concrete, with its surcharge, has been spread, start the motor and manually pull the beam along the slab. Make sure that there is always a continuous surcharge along the entire length of the leading edge, and that the ends of the beam ride on the edge forms.

Generally one steady pass with a double vibrating beam should be enough to compact and level the concrete.

However stiff mixes may require a second pass. Extra passes might bring laitance to the surface.

Before using the motor after an electrical repair or if using a three phase reversible motor, check the direction of rotation as shown by the direction arrow on the blade guard.

A 240 volt single phase electric motor can run in reverse due to incorrect internal connection of the motor winding when repaired.

When an extension lead is used, select the shortest length and

heaviest conductor size available to minimise voltage drop and prevent motor "burn out".

Start the electric motor by turning the on/off switch mounted on the motor to ON.

ALWAYS maintain good footing so that you do not slip and loose control when starting or operating the machine.

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## **CARE AND PREVENTIVE MAINTENANCE**

Check the vibrator oil level weekly.

Inspect the rubber anti vibration mounts for wear or deterioration.

Clean the aluminium beams regularly to prevent a build up of concrete residue.

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## **SERVICE**

Check the electric motor switch and the capacitor covers for damage and "water tightness" each week.

Check all fasteners for tightness as the machine is subject to vibration.

Check vee belt tension, wear and that it is running true, adjust or replace as required.

To test run the screed support the beams on a resilient support at each end. (eg. use two car tyres.)

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## **CLEANING AND STORAGE**

Keep the unit clean and free of concrete residue.

Ensure the cooling fins on the motor are kept unobstructed.

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## **SPECIFICATIONS**

### **ELECTRICAL SUPPLY**

Voltage	Current
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BE36S - 240 volt AC, 50 Hz	9.6 amp
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### **MOTOR**

BE36S - 1.49 kW (2.0 HP) output.

Dual capacitor type for high torque starting and running. Fitted with a manual reset thermal overload protection device. Hoseproof, totally enclosed and fan cooled.

WEIGHT	4.1 M	6.5 M	8.2 M
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Std beams	84 kg		
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Pre-tensioned	119 kg	133 kg	
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### **SHIPPING SIZE (L X W X H)**

4.1 m	4100 mm x 500 mm x 460 mm
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6.5 m	6500 mm x 500 mm x 460 mm
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8.2 m	8200 mm x 500 mm x 460 mm
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### **DRIVE BELTS**

1 x 'A' section vee belt

### **VIBRATOR**

Frequency - 4,275 vibrations/min

Centrifugal force - 2.5 kN

Note: Standard product provides optimum vibration for screeding floor slabs with timber forms. Pre-cast panels and floor slabs with steel forms may require the use of lower amplitude vibrators. Details on application.

### **BEARINGS**

Vibrator - oil bath lubricated

## TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSES AND CORRECTION
Motor will not start	<ul style="list-style-type: none"><li>■ Check the ON/OFF switch to ensure that it is switched 'ON'.</li><li>■ Check the power supply and fuse or circuit breaker</li></ul>
Motor stops	<ul style="list-style-type: none"><li>■ Thermal overload has tripped. (single phase only) - switch the power supply OFF and reset the thermal overload after the motor has cooled.</li><li>■ Check the power supply and fuse or circuit breaker.</li></ul>
Electric Motor lacks power	<ul style="list-style-type: none"><li>■ Check the local power supply for voltage drop.</li><li>■ Use a shorter or a heavy duty extension lead. Insufficient vibration</li><li>■ Check for a slipping or a missing vee belt.</li></ul>



**Parchem Construction Supplies Pty Ltd**  
7 Lucca Road, Wyong NSW 2259  
Phone: 1300 737 787  
[www.parchem.com.au](http://www.parchem.com.au)  
ABN 80 069 961 968